ARJUNA JEE 2023

Mole Concept

DPP-03

1. What is the mass of 0.5 moles of O_3 molecules?
(1) 16 gm (2) 20 gm
(3) 40 gm (4) 24 gm

2. Which has maximum number of oxygen atoms?
(1) 1 gm of O
(2) 1 gm of O_2
(3) 1 gm of O_3
(4) All have same no. of O-atoms

3. The number of oxygen atoms in 4.4 g of CO_2 is
(1) 6×10^{23} (2) 11×10^{23}
(3) 12×10^{23} (4) 1.2×10^{23}

4. One mole of CH_4 contains
(1) 4.0 g atoms of hydrogen
(2) 3.0 g atoms of carbon
(3) 6.02×10^{23} atoms of hydrogen
(4) 1.81×10^{23} molecules of CH_4

5. Find the number of atoms present in 0.016 g of methane.
(1) 0.5 N_0 (2) 0.005 N_0
(3) N_0 (4) 1.6 N_0

6. The weight of 1×10^{22} molecules of $CuSO_4.2H_2O$ is
(1) 2.40 g (2) 1.42 g
(3) 3.25 g (4) 8.94 g

7. Number of atoms in 4.25 g of NH_3 is approximately
(1) 6×10^{23} (2) 15×10^{23}
(3) 1.5×10^{23} (4) 2.5×10^{23}

8. Which one of the following has maximum number of atoms?
(1) 16 g of C (2) 20 g of Na
(3) 45 g of S (4) 15 g of N

9. How many moles of magnesium phosphate, $Mg_3(PO_4)_2$ will contain 0.25 mole of oxygen atoms?
(1) 2.5×10^{-2} (2) 3.125×10^{-2}
(3) 0.02 (4) 1.25×10^{-2}

10. The maximum number of molecules is present in
(1) 15 L of H_2 gas at STP
(2) 5 L of N_2 gas at STP
(3) 1.5 g of H_2 gas
(4) 5g of O_2 gas

11. 2g of O_2 at NTP occupies the volume
(1) 1.4 L (2) 2.8 L
(3) 11.4 L (4) 3.2 L

12. Find mass of CO_2 which have same molecules as present in 68 g of NH_3?
(1) 88 g (2) 176 g
(3) 44 g (4) 132 g

Answer Key

1.	(4)	7.	(1)
2.	(4)	8.	(3)
3.	(4)	9.	(2)
4.	(1)	10.	(1)
5.	(2)	11.	(1)
6.	(3)	12.	(2)

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